

#### Abstract

Present invention particularly relates to production of alkaline protease for various industries and especially for "enzyme detergents" by a fungus *Aspergillus sp.* deposited in the microbial type culture collection of Institute of Microbial Technology, Chandigarh, India, under the accession number MTCC 5102 and the said fungus can be grown in conventional media with commercial brands of milk powder using distilled water at pH 7.0 at room temperature ( $28^{\circ}\text{C} \pm 2^{\circ}\text{C}$ ), however, the said fungus grows well in seawater media too and also at  $5^{\circ}\text{C}$ ; further, the protease enzyme produced by this fungus acts equally well in the pH range of 6 to 11 and shows 100% activity at temperature of  $42-47^{\circ}\text{C}$  but almost 90% of the activity is present at  $30^{\circ}\text{C}$ , 50% of the activity at  $15^{\circ}\text{C}$  and at  $60^{\circ}\text{C}$  The enzyme is thermostable up to 45 min at  $45^{\circ}\text{C}$ .

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